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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,468	12/13/2000	Hikmet Sari	Q 62241	8806

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EXAMINER
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MILLS, DONALD L

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 02/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/719,468

Applicant(s)

SARI, HIKMET

Examiner

Donald L Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 6-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Rotstein et al. (US 6,091,759), hereinafter referred to as Rotstein.

Regarding claim 1, Rotstein discloses a method for spreading and dispreading data in a spread-spectrum communication system, which comprises:

*Symbols of messages to certain user terminals are coded with a coding sequence of  $2N$  bits to produce sequences of  $2N$  chips* (Referring to Figure 2, direct-spread transmission comprises 64 chips, inherently comprising a coding sequence of  $2N$  bits to produce a sequence of 64 chips. See column 4, lines 25-26.)

*The chips are transmitted* (Referring to Figure 2, direct-spread transmission comprises 64 chips, inherently transmitted. See column 4, lines 25-26.)

*Characterized in that:*

*Symbols of other messages to certain other user terminals are coded with a coding sequence of  $k2N$  bits to produce sequences of  $k2N$  chips, where  $k$  is an integer greater than 1*

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(Referring to Figure 2, multi-carrier transmission comprises 256 chips, inherently comprising a coding sequence of  $k2N$  chips, where  $k$  is greater than 1. See column 4, lines 21-22.)

Regarding claim 2, Rotstien discloses a method *characterized in that at least two symbols of said other messages are transmitted simultaneously* (Referring to Figure 2, during multi-carrier transmission, three consecutive Walsh codes share the same time-varying PN code, as if they were transmitted simultaneously. See column 4, lines 39-41.)

Regarding claim 3, Rotstien discloses a method *characterized in that  $k$  symbols of said other messages are transmitted simultaneously* (Referring to Figure 2, during multi-carrier transmission, three consecutive Walsh codes share the same time-varying PN code, as if they were transmitted simultaneously. See column 4, lines 39-41.)

Regarding claim 6, Rotstein discloses a method *characterized in that the symbols or the chips are coded by random bit sequences* (Referring to Figure 2, the sequence of walsh codes is further scrambled by a pair of PN codes 224. See column 4, lines 27-28.)

Regarding claim 7, Rotstein discloses a method *characterized in that a single sequence is concatenated with a repetition of that single sequence or with a complementary single sequence to constitute a coding sequence  $k2N$*  (Referring to Figure 2, multi-carrier transmission comprises 256 chips, inherently comprising a repetition of the sequence during multi-message transmission. See column 4, lines 21-22.)

Regarding claim 8, Rotstein discloses a method *characterized in that decoding subsystems are used simultaneously in a user terminal  $k$  to decode in parallel  $k$  symbols of a message transmitted to that user* (Referring to Figure 5, during multi-carrier reception all Walsh

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codes utilized comprise **256** chips at multi-mode receiver back end **500**. See column 6, lines 47-48 and lines 21-22.)

Regarding claim 9, Rotstein discloses a method *characterized in that a symbol is decoded in a user terminal with a decoding sequence of length  $k2N$*  (Referring to Figure 5, during multi-carrier reception all Walsh codes utilized comprise **256** chips. See column 6, lines 21-22.)

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rotstein et al. (US 6,091,759), hereinafter referred to as Rotstein, in view of Boch (US 6,205,337 B1).

Regarding claim 4 as explained above in the rejection statement of claim 1, Rotstein discloses all of the claim limitations of claim 1. Rotstein further teaches *coding sequences that are divided into subsets* (Referring to Figure 2, the sequence of Walsh codes are further scrambled to generate an I-channel and Q-channel spread sequence. See column 4, lines 27-29.) Rotstein does not disclose *a radiation cell of a base transceiver station is divided into sectors; a common carrier frequency is used for all the sectors of the cell; and different subsets are assigned to user terminals which are located in adjoining or contiguous sectors.*

Boch teaches a 4-sectored cell as seen in Figure 3, which utilizes a common carrier frequency for user terminals in adjacent sectors (See column 6, lines 17-18.)

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement sectional cell system of Boch in the system of Rotstein. One of ordinary skill in the art would have been motivated to do so in order to subdivide a cell in order to optimize utilization of each frequency within the allocated frequency range as taught by Boch (See column 1, lines 30-33.)

Regarding claim 5 as explained above in the rejection statement of claim 1, Rotstein discloses all of the claim limitations of claim 1. Rotstein does not disclose a method *characterized in that different base transceiver stations of a cellular system transmit chips on a common carrier frequency and with a common pass-band.*

Boch teaches a 4-sectored cell as seen in Figure 3, which utilizes a common carrier frequency for user terminals in adjacent sectors (See column 6, lines 17-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement sectional cell system of Boch in the chip system of Rotstein. One of ordinary skill in the art would have been motivated to do so in order to subdivide a cell in order to optimize utilization of each frequency within the allocated frequency range as taught by Boch (See column 1, lines 30-33.)

### ***Conclusion***

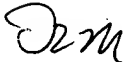
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

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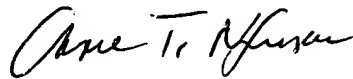
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Donald L Mills



January 13, 2004



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